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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/925,578	08/09/2001	Bruce Leroy Beukema	AUS920010473US1	3040
35525	7590	06/14/2005	EXAMINER	
IBM CORP (YA) C/O YEE & ASSOCIATES PC P.O. BOX 802333 DALLAS, TX 75380			WALSH, JOHN B	
			ART UNIT	PAPER NUMBER
			2151	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/925,578

Applicant(s)

BEUKEMA ET AL.

Examiner

John B. Walsh

Art Unit

2151

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

60

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-35 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,898,687 to Harriman et al.

As concerns claim 1, a method of multicasting a data packet in a system area network, comprising: receiving the data packet (column 1, lines 17), wherein the data packet includes an identifier of a multicast group (inherent in multicasting for data packet to have a group identifier); identifying a plurality of queue pairs that are members of the multicast group (column 2, lines 1-3, inherent in multicasting system); and delivering the data packet to each of the plurality of queue pairs that are members of the multicast group (inherent in multicasting system).

As concerns claim 2, the method of claim 1, wherein the data packet is received in a channel adapter of an end node (column 3, lines 47-48).

As concerns claim 3, the method of claim 2, wherein delivering the data packet to each of the plurality of queue pairs that are members of the multicast group includes replicating the data packet for each of the plurality of queue pairs that are internal to the end node (inherent in multicasting system, column 1, line 65-column 2, line 3).

Art Unit: 2151

As concerns claim 4, the method of claim 1, further comprising: decoding the data packet (column 2, lines 16-17); and storing the data packet in a multicast packet buffer (column 2, lines 17-18).

As concerns claim 5, the method of claim 4, wherein decoding the data packet and storing the data packet in the multicast packet buffer are performed by port logic (column 2, lines 12-28).

As concerns claim 6, the method of claim 4, wherein decoding the data packet and storing the data packet in the multicast packet buffer are performed by channel adapter logic (column 2, lines 12-28).

As concerns claim 7, the method of claim 1, wherein identifying the plurality of queue pairs includes determining which queue pairs are associated with a destination local identifier in the data packet (column 2, lines 1-11, inherent in multicast system).

As concerns claim 8, the method of claim 7, wherein determining which queue pairs are associated with the destination local identifier includes using a destination local identifier to queue pair lookup table (inherent in multicast system, column 2, lines 52-65).

As concerns claim 9, the method of claim 8, wherein the destination local identifier to queue pair lookup table contains a fixed number of queue pair identifier columns per destination local identifier (fixed number at a point in time).

As concerns claim 10, the method of claim 8, wherein the destination local identifier to queue pair lookup table contains a flexible number of queue pair identifier columns per destination local identifier (flexible number over a certain period of time).

As concerns claim 11, the method of claim 10, wherein one of the queue pair identifier columns associated with the destination local identifier serves as a link to another entry (column 2, lines 52-65) in the destination local identifier to queue pair lookup table.

As concerns claim 12, a computer program product in a computer readable medium for multicasting a data packet in a system area network, comprising: first instructions for receiving the data packet (column 1, lines 17), wherein the data packet includes an identifier of a multicast group (inherent in multicasting for data packet to have a group identifier); second instructions for identifying a plurality of queue pairs that are members of the multicast group (column 2, lines 1-3, inherent in multicasting system); and third instructions for delivering the data packet to each of the plurality of queue pairs that are members of the multicast group (inherent in multicasting system).

As concerns claim 13, the computer program product of claim 12, wherein the data packet is received in a channel adapter of an end node (column 3, lines 47-48).

As concerns claim 14, the computer program product of claim 13, wherein the third instructions for delivering the data packet to each of the plurality of queue pairs that are members of the multicast group include instructions for replicating the data packet for each of the plurality of queue pairs that are internal to the end node (inherent in multicasting system; column 1, line 65-column 2, line 3).

As concerns claim 15, the computer program product of claim 12, further comprising: fourth instructions for decoding the data packet (column 2, lines 16-17); and fifth instructions for storing the data packet in a multicast packet buffer (column 2, lines 17-18).

As concerns claim 16, the computer program product of claim 15, wherein the fourth instructions for decoding the data packet and the fifth instructions for storing the data packet in the multicast packet buffer are executed by port logic (column 2, lines 12-28).

As concerns claim 17, the computer program product of claim 15, wherein the fourth instructions for decoding the data packet and the fifth instructions for storing the data packet in the multicast packet buffer are executed by channel adapter logic (column 2, lines 12-28).

As concerns claim 18, the computer program product of claim 12, wherein the second instructions for identifying the plurality of queue pairs include instructions for determining which queue pairs are associated with a destination local identifier in the data packet (column 2, lines 1-11, inherent in multicast system).

As concerns claim 19, the computer program product of claim 18, wherein the instructions for determining which queue pairs are associated with the destination local identifier include instructions for using a destination local identifier to queue pair lookup table (inherent in multicast system, column 2, lines 52-65).

As concerns claim 20, the computer program product of claim 19, wherein the destination local identifier to queue pair lookup table contains a fixed number of queue pair identifier columns per destination local identifier (table has a fixed number at a point in time).

As concerns claim 21, the computer program product of claim 19, wherein the destination local identifier to queue pair lookup table contains a flexible number of queue pair identifier columns per destination local identifier (table has a flexible number over a period of time).

As concerns claim 22, the computer program product of claim 21, wherein one of the queue pair identifier columns associated with the destination local identifier serves as a link to

Art Unit: 2151

another entry in the destination local identifier to queue pair lookup table (column 2, lines 52-65; index and pointers).

As concerns claim 23, an apparatus for multicasting a data packet in a system area network, comprising: means for receiving the data packet (column 1, lines 17, data packet received), wherein the data packet includes an identifier of a multicast group (inherent in multicasting for data packet to have a group identifier); means for identifying a plurality of queue pairs that are members of the multicast group (column 2, lines 1-3, inherent in multicasting system); and means for delivering the data packet to each of the plurality of queue pairs that are members of the multicast group (inherent in multicasting system).

As concerns claim 24, the apparatus of claim 23, wherein the data packet is received in a channel adapter of an end node (column 3, lines 47-48).

As concerns claim 25, the apparatus of claim 24, wherein the means for delivering the data packet to each of the plurality of queue pairs that are members of the multicast group includes means for replicating the data packet for each of the plurality of queue pairs that are internal to the end node (inherent in multicasting system; column 1, line 65-column 2, line 3).

As concerns claim 26, the apparatus of claim 23, further comprising: means for decoding the data packet (column 2, lines 16-17); and means for storing the data packet in a multicast packet buffer (column 2, lines 17-18).

As concerns claim 27, the apparatus of claim 26, wherein the means for decoding the data packet and means for storing the data packet in the multicast packet buffer are include port logic (column 2, lines 12-28).

As concerns claim 28. The apparatus of claim 26, wherein the means for decoding the data packet and means for storing the data packet in the multicast packet buffer include

Art Unit: 2151

channel adapter logic (column 2, lines 12-28).

As concerns claim 29, the apparatus of claim 23, wherein the means for identifying the plurality of queue pairs includes means for determining which queue pairs are associated with a destination local identifier in the data packet (column 2, lines 1-11, inherent in multicast system).

As concerns claim 30, the apparatus of claim 29, wherein the means for determining which queue pairs are associated with the destination local identifier includes means for using a destination local identifier to queue pair lookup table (inherent in multicast system, column 2, lines 52-65).

As concerns claim 31, the apparatus of claim 30, wherein the destination local identifier to queue pair lookup table contains a fixed number of queue pair identifier columns per destination local identifier (table has a fixed number at a point in time).

As concerns claim 32, the apparatus of claim 30, wherein the destination local identifier to queue pair lookup table contains a flexible number of queue pair identifier columns per destination local identifier (table has a flexible number over a period of time).

As concerns claim 33, the apparatus of claim 32, wherein one of the queue pair identifier columns associated with the destination local identifier serves as a link to another entry in the destination local identifier to queue pair lookup table (column 2, lines 52-65, index and pointers).

As concerns claim 34, the method of claim 1, wherein receiving the data packet includes: determining if there is an error in receipt of the data packet; and if there is an error in receipt of the data packet, dropping the data packet (ATM cells may be dropped).

Art Unit: 2151

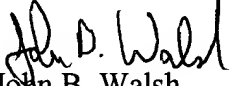
As concerns claim 35, the method of claim 1, wherein delivering the data packet to each of the plurality of queue pairs that are members of the multicast group includes: determining if there is an error in delivering the data packet to each of the plurality of queue pairs; and dropping the data packet if an error occurs during delivery of the data packet to each of the plurality of queue pairs (ATM cells may be dropped).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Walsh whose telephone number is 571-272-7063. The examiner can normally be reached on Monday-Wednesday from 5:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John B. Walsh
Primary Examiner
Art Unit 2151